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IN THE UNITED STATES PATENT OFFICE

In re Application of	:	David C. Fischer
Application No.	:	10/660,543
Group No.	:	2859
Filed	:	September 12, 2003
For	:	METHOD AND DEVICE FOR MEASURING ANGULAR OR LINEAR DISPLACEMENT
Examiner	:	Tania C. Courson

Assistant Commissioner for Patents
Washington, D.C. 20231

ATTENTION: Board of Patent Appeals and Interferences

APPELLANTS' SECOND REVISED APPEAL BRIEF

This brief is in furtherance of the Notice of Appeal, filed in this case on August 10, 2006, and further is in response to the Notifications of Non-Compliant Appeal Brief dated September 22, 2006 and October 26, 2006..

TRANSMITTAL OF APPEAL BRIEF.

This brief is submitted in triplicate.

I. REAL PARTY IN INTEREST

The real party in interest in this appeal is David C. Fischer.

II. RELATED APPEALS AND INTERFERENCES

There are no other appeals or interferences that will directly affect, or be directly affected by, or have a bearing on the Board's decision in this appeal.

III. STATUS OF CLAIMS

TOTAL NUMBER OF CLAIMS IN APPLICATION Claims in the application are 1-17.

A. STATUS OF THE CLAIMS

1. Claims cancelled: 4, 12, 13

2. Claims withdrawn from consideration but not cancelled: 6,7, 14, 15

3. Claims pending: 1-3, 5, 8-11, 16 and 17

4. Claims allowed: None

5. Claims rejected: 1-3, 5, 8-11, 16 and 17

B. CLAIMS ON APPEAL

The claims on appeal are 1-3, 5, 8-11, 16 and 17.

IV. STATUS OF AMENDMENTS

No amendment has been filed subsequent to final rejection.

V. SUMMARY OF CLAIMED SUBJECT MATTER

The invention defined in the claims on appeals relates to an apparatus and method for measuring the distance traversed by an object (10) along an arcuate path, page 5, lines 19-21. As defined in Claim 1, the apparatus comprises an electrically conductive member (14), page 5, lines 21-22, that is movable along the path by an amount representative of the movement of the object along the arcuate path. A plurality of spaced and insulated contacts (22), page 6, lines 9-11, are arranged along an arcuate path along which the conductive member (14) moves along the path of the contacts (22) by an amount corresponding to the traveled by the object (10), such that as the conductive member (14) moves it makes electrical contact with one of the contacts (22). Each of the contacts (22)

is respectively operatively connected to one of a corresponding plurality of data-storing locations (24) of a memory or data-storing means (26), described at page 6, lines 13-14 as a read-only memory..

In accordance with the claimed invention, a different preset angular distance-measurement data is stored in each of the memory locations (24), that data being different and unique to each memory location, page 6, lines 13-16. The distance-measurement data stored in each memory location (24) corresponds uniquely to the relative position of the contact (22) to which that memory location (24) is operatively connected, page 6, lines 14-15. There is thus in applicant's distance-measuring apparatus, as defined in the claims here on appeal, a unique, one-to-one relationship between the preset distance-measurement data stored respectively in the memory locations (24) and the relative position of the individual contacts (22) to which those memory locations are respectively operatively connected. Only that distance-measurement data stored in the memory location (24) connected operatively to the contact (22) then contacted by the conductive movable member (14) is applied to an output means or device (30), page 6, lines 20-21. The information displayed on the output device (30) is the distance-measurement data stored in that memory location (24) and thus represents the distance traveled or traversed by the object in question along the arcuate path.

The other independent claim, Claim 17, describes the invention in terms of a method for determining the distance traveled by a movable object (10) along a fixed, arcuate path, page 5, lines 19-21. The claimed method includes the steps of arranging a plurality of fixed, spaced contacts (22) along at least one side of the path. A conductive member (14) is moved along the path of the contacts (22) by an amount representative of

the relative movement of the object (10), which causes the conductive member (14) to make electrical contact with one of the contacts (22).

A plurality of different,t preset distance-measurement data are stored in a corresponding plurality of data-storing locations (24) in a memory (26). The data-storing locations (24) are respectively uniquely associated with the contacts (22) to which the locations (24) are respectively operatively connected. The distance-measurement data stored in the locations (24) are uniquely respectively associated with the contacts (22) to which the locations (24 are respectively operatively connected, page 6, lines 13-16.

The distance-measurement data stored in that location (24) to which the movable contact (14) is then in operative contact through its associated contact (22) is applied to an output device (30).

VI. GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL

The single ground for rejection presented in this appeal for review is the rejection of the Claims on appeal under 35 USC 103 for obviousness in view of the cited prior art to Bell and Noy et al.

VII. ARGUMENT

a) The rejection of independent claims 1 and 17 for obviousness under 35 USC 103 was in error.

The Examiner's rejection of claims 1 and 17 and the remaining dependent claims on appeal for obviousness over the cited Bell and Noy et al references was in error for the fundamental reason that neither cited reference discloses or even remotely suggests the

central feature of the claimed invention, namely the "data-storing means" defined, e.g., in Claim 1 as:

> data-storing means operatively connected to said plurality of contacts, said data-storing means including a corresponding plurality of memory locations each of which stores a preset, different distance-measurement data and each of which is respectively operatively connected to one of said plurality of contacts, each of said distance-measurement data stored respectively in said plurality of memory locations being uniquely respectively associated with one of said plurality of contacts along said path to which said memory location is operatively connected;

A brief review of the prosecution of this application before the Examiner reveals the Examiner's continuing confusion and incorrect understanding of the claimed subject matter and the teachings of the prior art. In an Office Action dated June1, 2006, the Examiner rejected the independent claims 1 and 7 here on appeal under Sec. 102 as "being anticipated by Bell". Only the dependent claims 3, 8, 11 and 16 were rejected for obviousness under Sec. 103 "as being unpatentable over Bell in view of Noy et al". The latter was cited only for its teaching the use of a ROM as a data-storing means.

In the response to this Office Action applicant did not amend the claims, but instead argued:

> What is lacking in Bell, as it was in the previously cited references, is the inclusion in the applicant's measuring apparatus and method, as defined in claims 1 and 17, of a memory that contains at each of a plurality of addresses or memory locations different stored distance-measurement data, each of which bears a unique, one-to-one relationship with the one of a corresponding plurality of contacts to which those memory locations are respectively connected. When one of those contacts is contacted by the movable member, it applies a control voltage that causes only the distance-measurement data uniquely associated with that one contact to be read out from the data-storing means to an output display device, thereby to provide an indication of the distance traveled by the movable member along the arcuate path.

In her next Office Action, the Examiner conceded her prior error by now noting that Bell "did not disclose" the claimed "data-storing means" and asserted that she had

found applicant's prior arguments to this effect, as quoted above, to have been "persuasive". Rather than allowing the claims, the Examiner now remarkably found that the CPU in Noy et al, previously referred to only in a Sec. 103 rejection of several dependent claims, satisfied all the requirements of the claimed "data-storing means" as described above. The Examiner by thus belatedly applying Noy et al has, however, once again erred in construing the claims and the prior art. It is respectfully submitted that this error is a fundamental flaw in the final rejection of the claims from which this appeal is taken.

Noy et al discloses a wellbore survey apparatus that includes a gyroscope and a set of accelerometers that determine the azimuthal inclination of the wellbore at a given location. Fig 9 of Noy et al schematically illustrates the surface components of the apparatus including the CPU 100, which merits only the single mention at col. 11, line 57 of Noy et al. All that is disclosed in Noy et al about the CPU 100 is that it receives the inputs from a depth-measuring equipment 118, which, as noted at col. 7, lines 25-26 of Noy et al, measures the length of wireline 14 that extends into the wellbore, and from a surface interface 102. There is no disclosure of any memory in Noy et al or what, if anything may be stored in a memory*. There is no further discussion in Noy et al of the CPU 100 or of what function it serves in the Noy et al apparatus.

Significantly, for the purposes of this Appeal, there is not, despite the Examiner's totally unsupported assertions to the contrary, any disclosure in Noy et al that the CPU

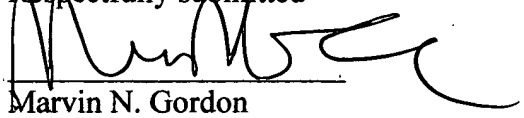
* In reading the claimed "data-storing means" on the Noy et al CPU 100, the Examiner may have confused the output "means" (30) of the applicant's claimed apparatus, which is described in one embodiment as a CPU, with the claimed "data-storing means".

100 in Noy et al includes memory locations that respectively store the preset distance-measurement data described in greater detail above and as recited in apparatus claim 1 and the corresponding method claim 17. Nor should this come as any surprise since the Noy et al apparatus has no interest in, or capability of, performing the angular-distance measurement achieved in the applicant's claimed apparatus.

It is thus clear that the final rejection of the claims is based on a fundamentally flawed and erroneous premise, namely what is taught, or more accurately, what is not taught in Noy et al regarding the CPU 100. There is thus no need to discuss whether there is any basis for the Examiner's proposed combination of Bell and Noy et al since neither includes or describes the claimed "data-storing means". The Examiner has conceded, after a prior contrary assertion, that Bell does not disclose this claimed feature of applican's apparatus, and it is abundantly clear, as pointed out above, that this feature is also totally absent in Noy et al.

Since neither Bell nor Noy et al discloses or suggests the applicant's claimed "data-storing means", no combination of these references would even remotely arrive at the applicant's claimed apparatus. It is accordingly submitted that the Examiner's rejection of the claims on appeal was in error. This Board is thus respectfully requested to reverse the Examiner and find these claims allowable.

Respectfully submitted



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CERTIFICATE OF MAILING

This is to certify that the foregoing Appellant's Second Revised Brief was sent to the Commissioner for Patents, P.O. Box 1450, Arlington, Virginia 22313-1450 by first-class overnight Mail, postage prepaid on November 1, 2006.

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Marvin N. Gordon

CLAIMS APPENDIX

1. An apparatus for measuring the distance traveled along a fixed arcuate path by a movable object, said apparatus comprising:

a member movable along said arcuate path to a position along said path corresponding to the relative position of the object;

a plurality of spaced insulated contacts insulated from one another and positioned along at least one side of said path;

data-storing means operatively connected to said plurality of contacts, said data-storing means including a corresponding plurality of memory locations each of which stores a preset, different distance measurement data and each of which is respectively operatively connected to one of said plurality of contacts, each of said distance-measurement data stored respectively in said plurality of memory locations being uniquely associated with one of said plurality of contacts along said path to which said memory location is operatively respectively connected; and

output means operatively connected to said data-storing means;

said movable member being effective as it moves along said path to engage one of said contacts, thereby to cause only the distance-measurement data stored in the one of said memory locations then operatively connected to said one of said contacts to be applied to said output means.

2. The apparatus of Claim 1, in which said output means is a display device.

3. The apparatus of Claim 1, in which said output means is a CPU.

5. The apparatus of Claim 1, in which said movable member is connected at one of its ends to a voltage source and its other end is movable along said arcuate path to make electrical contact with one of said contacts.

8. The apparatus of Claim 1, in which said data-storing means is a ROM.

9. The apparatus of Claim 1, further comprising a voltage source, said member being effective when in electrical contact with one of said contacts to place an associated one of said memory locations in circuit arrangement with said voltage source.

10. The apparatus of Claim 9, in which said output means is a display device.

11. The apparatus of Claim 9, in which said output means is a CPU.

16. The apparatus of Claim 9, in which said data-storing means is a ROM.

17. A method for determining the distance traveled by a movable object along a fixed, arcuate path, said method comprising the steps of:

arranging a plurality of fixed, spaced and insulated contacts along at least one side of said arcuate path;

moving an electrically conductive member along said path by an amount representative of the relative movement of said object, thereby causing said movable object to make electrical contact with one of said contacts;

storing respectively a corresponding plurality of different preset distance-measurement data in a corresponding plurality of data-storing locations in a memory respectively operatively connected to said plurality of contacts, the distance-measurement data stored in said plurality of data-storing locations being respectively uniquely associated with one of said plurality of contacts; and

causing the distance-measurement data stored in the one of said data-storing locations associated with and operatively connected to the one of said plurality of contacts then contacted by said movable member to be applied to an output device.

IX EVIDENCE APPENDIX

None.

X RELATED PROCEEDINGS APPENDIV

None.